Lecture 3

Nudges

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PS4168: Economic Psychology

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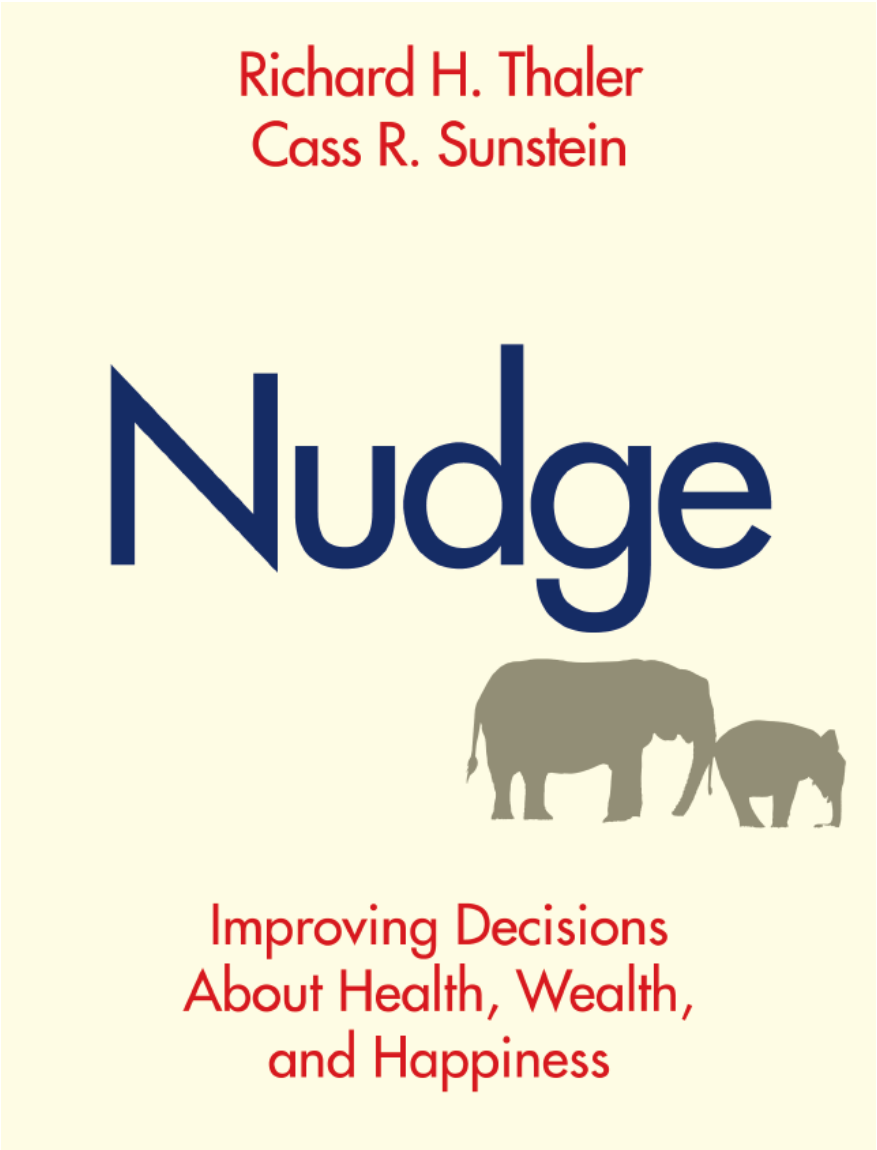
Nudge (Thaler & Sunstein, 2008)



Overview

- Background
  - Recap on heuristics/biases
  - Brief overview of dual-systems
- Nudges: Examples and Definition
- Nudges and Theory
- Wason Selection Task
- Assignment 1
- In-class Activity

Recap on last week!

- In Groups:
  - List 7 biases
    - and be ready to explain 3
  - List 5 Heuristics
    - and be ready to explain 2

Background

Background

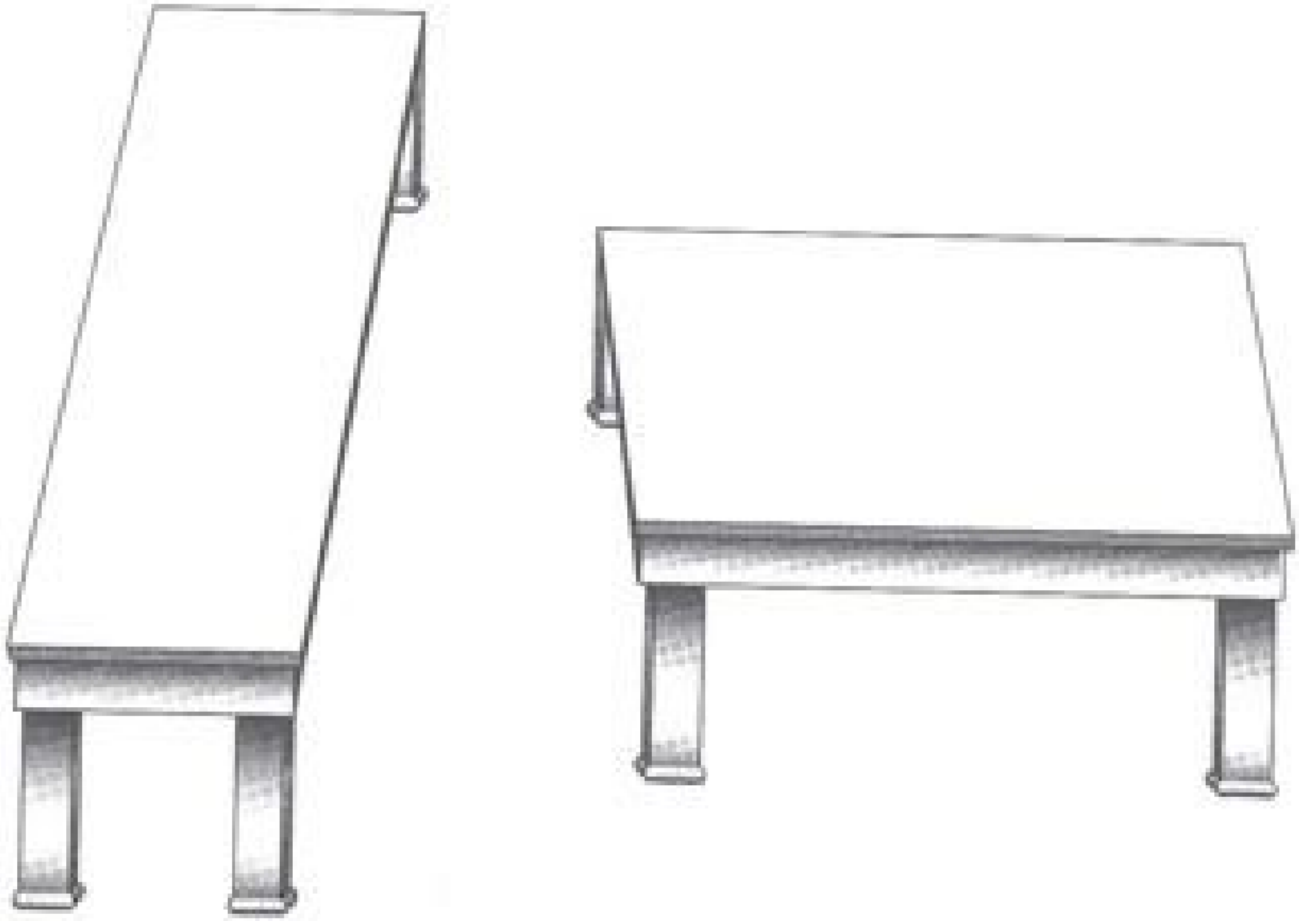
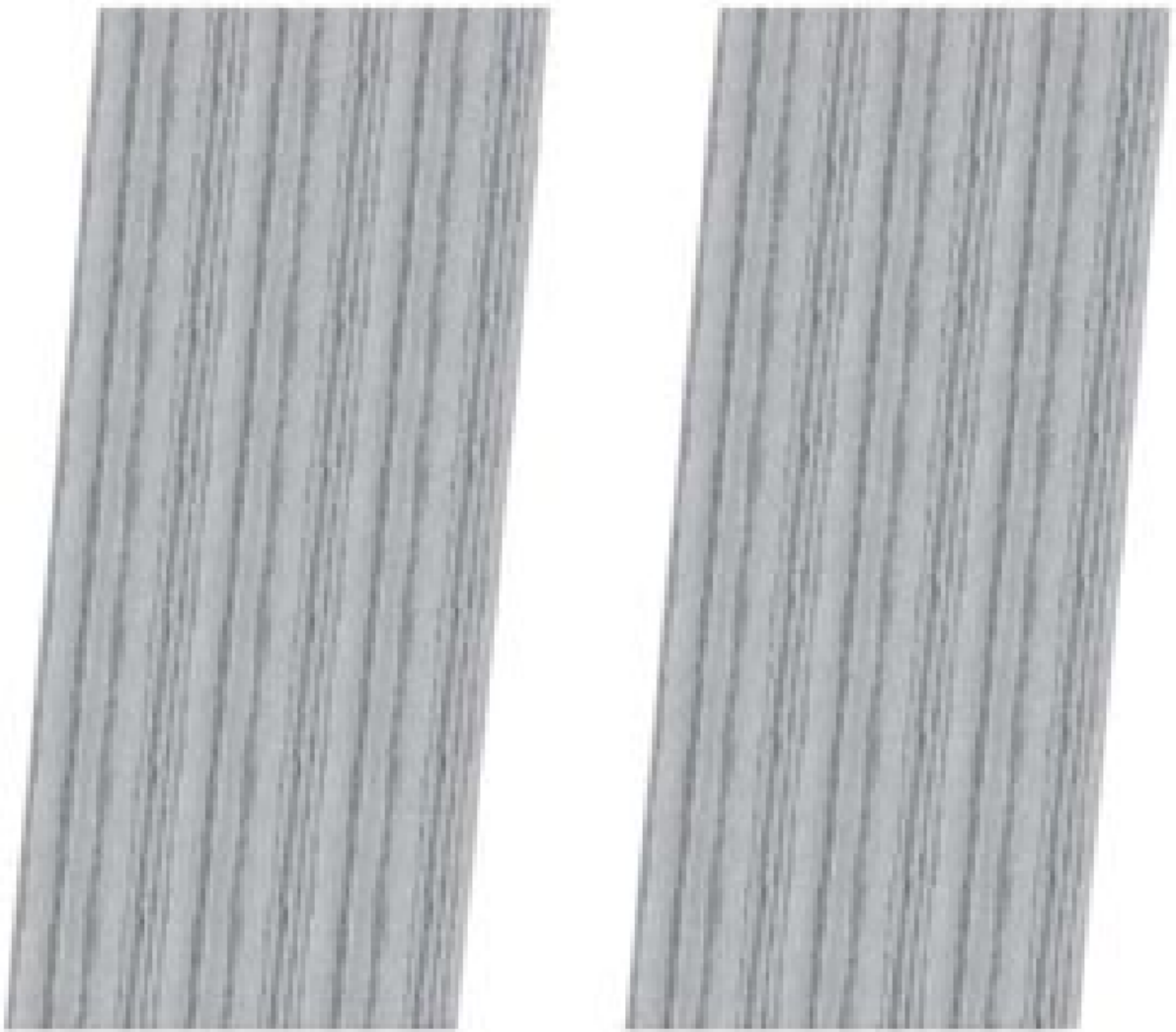


Figure 2: tables

Background



From Biases to Nudges

- Recall that a bias is:
  - "An inclination towards a position or conclusion" (Reber, 2001, p. 88)
  - A tendency to:
    - act in a particular way
    - make judgements in a particular way
  - An error in reasoning (Eysenck & Keane, 2005, p. 512)
- In some cases a bias is the "failure" of a heuristic judgement
  - A heuristic applied in the wrong context

From Biases to Nudges

- Heuristics and biases linked by similarities in underlying cognitive mechanisms
- Errors in applying heuristics manifest as biases
  - These biases led to the discovery of specific heuristics
    - (e.g., representativeness / availability)
- Study of heuristics and biases informed our understanding of how people think
  - Dual-process/Dual-systems Theories

Dual-processes / Dual-systems

Dual-processes / Dual-systems

Two cognitive systems

Automatic System	*Reflective System*
Uncontrolled	Controlled
Effortless	Effortful
Associative	Deductive
Fast	Slow
Unconscious	Self-aware
Skilled	Rule-following

Figure 4: tables

(taken from Thaler & Sunstein, 2008, p. 20)

Harnessing our Biases

- "System 1" $\rightarrow$ Heuristics
  - (mis-applied) Heuristics $\rightarrow$ Biases
    - Biases $\rightarrow$ poor choices (sometimes)
- ***But*** understanding biases $\rightarrow$ *Development of an Intervention*
  - *Intervention* $\rightarrow$ Good choices
- Specific type of intervention:
  - Nudge

What is a Nudge?

What is a Nudge?

Figure 5: tables

Fly in the Urinal

- Schiphol Airport in Amsterdam
- Fly etched into each urinal
- "Spillage" reduced by 80% (Thaler & Sunstein, 2008)

- Variations in other airports
  - A soccer goal equipped with a ball during the World Cup

- "Fly in the urinal has become the perfect exemplar of a nudge"(Thaler, 2015, p. 252)

Defining Nudges

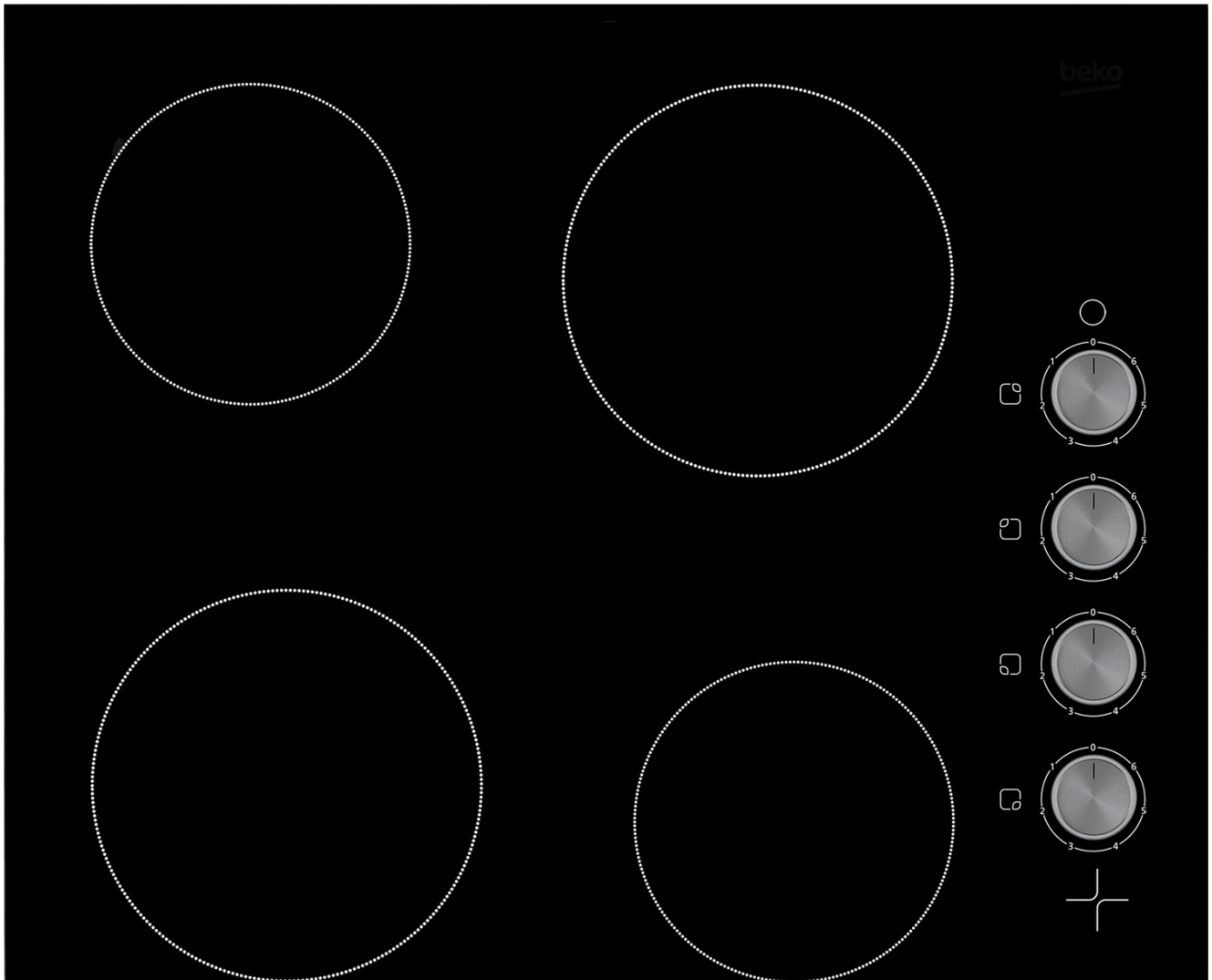
- "A nudge is some small feature in the environment that attracts our attention and influences behavior" (Thaler, 2015, p. 252)
- "any aspect of the choice architecture that alters people's behavior in a predictable way
  - without forbidding any options
  - or significantly changing their economic incentives" (Thaler & Sunstein, 2008, p. 6)
- Must be easy and cheap to avoid
- Nudges are not mandates:
  - Putting the fruit at eye level counts as a nudge
  - Banning junk food does not (Thaler & Sunstein, 2008, p. 6)

Defining Nudges and "Better Choices"

- Libertarian Paternalism
- Paternalism but "free to choose"
- Aim of Libertarian Paternalism is to:
  - "influence choices in a way that will make choosers better off, ***as judged by themselves***"

(Thaler, 2015, p. 251; Thaler & Sunstein, 2003; 2008, p. 5)

Hobs



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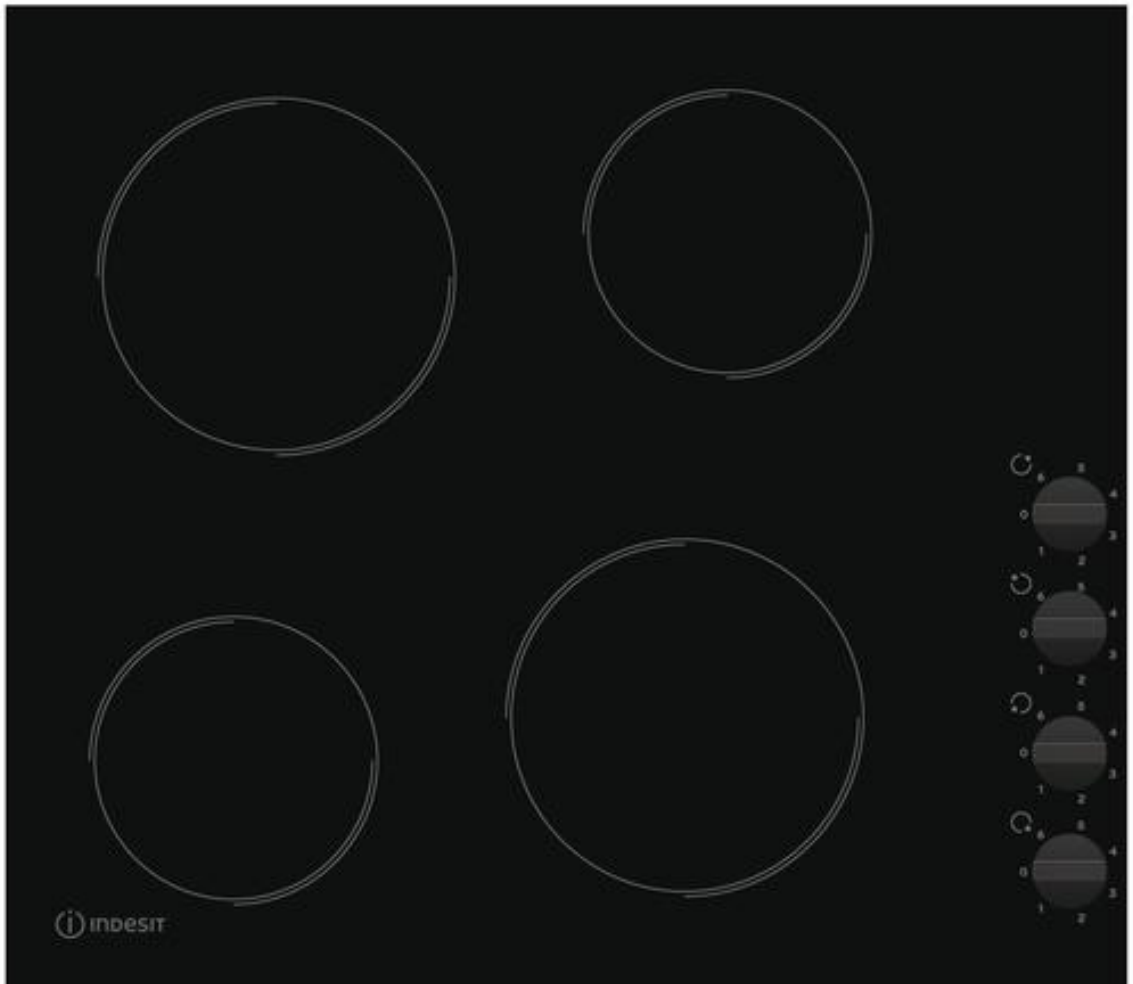
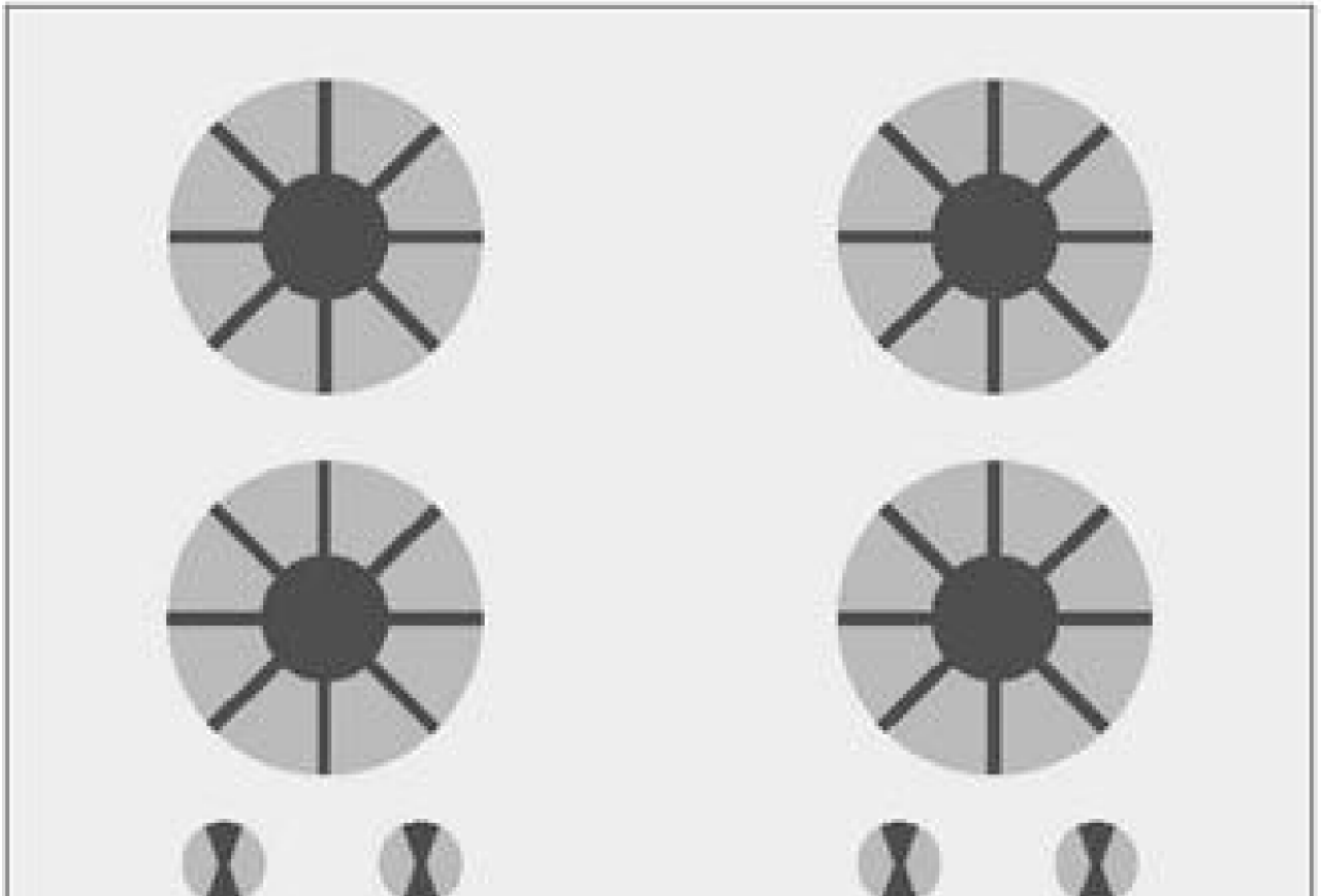


Hobs

Arrangement of Knobs on a Cooker



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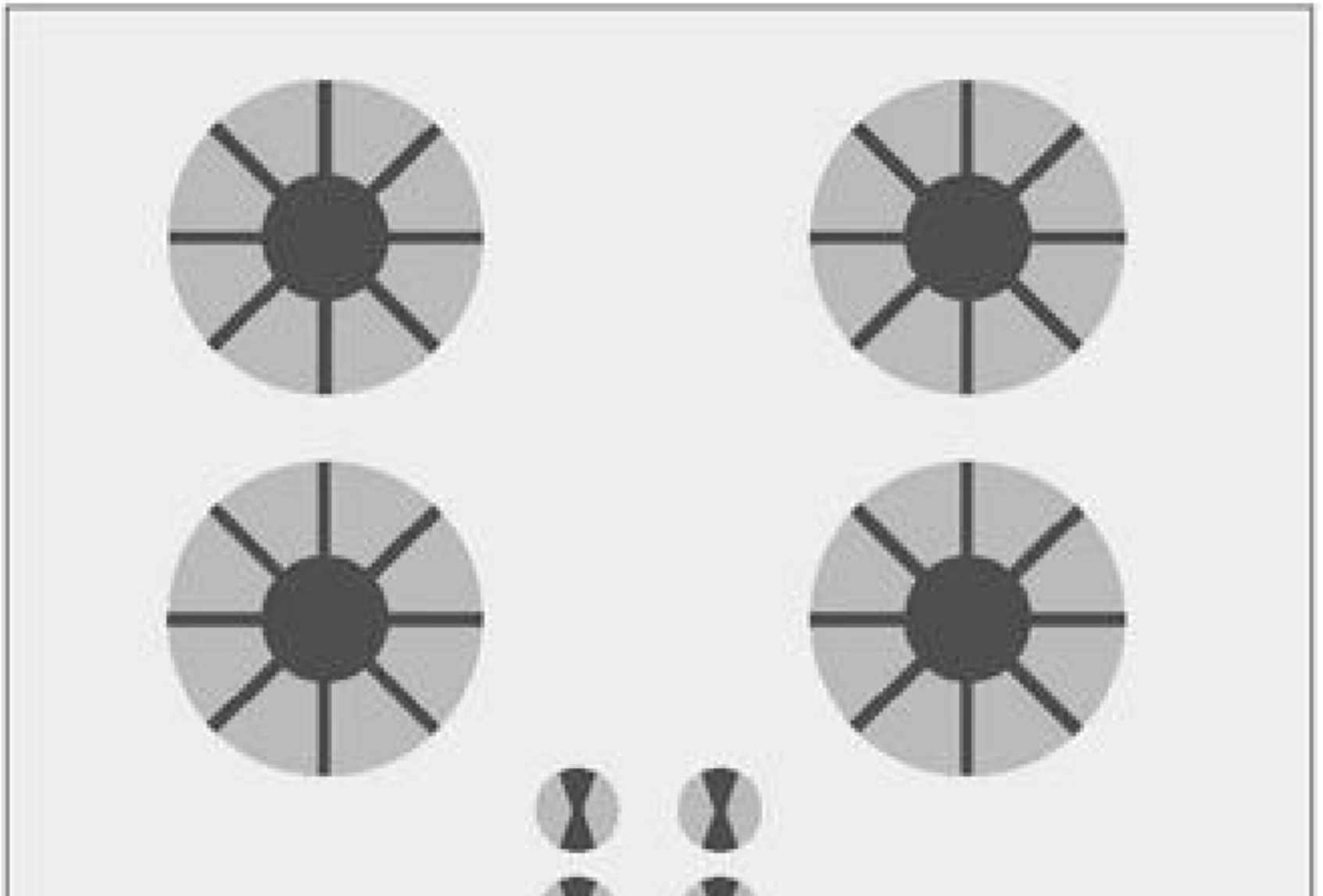

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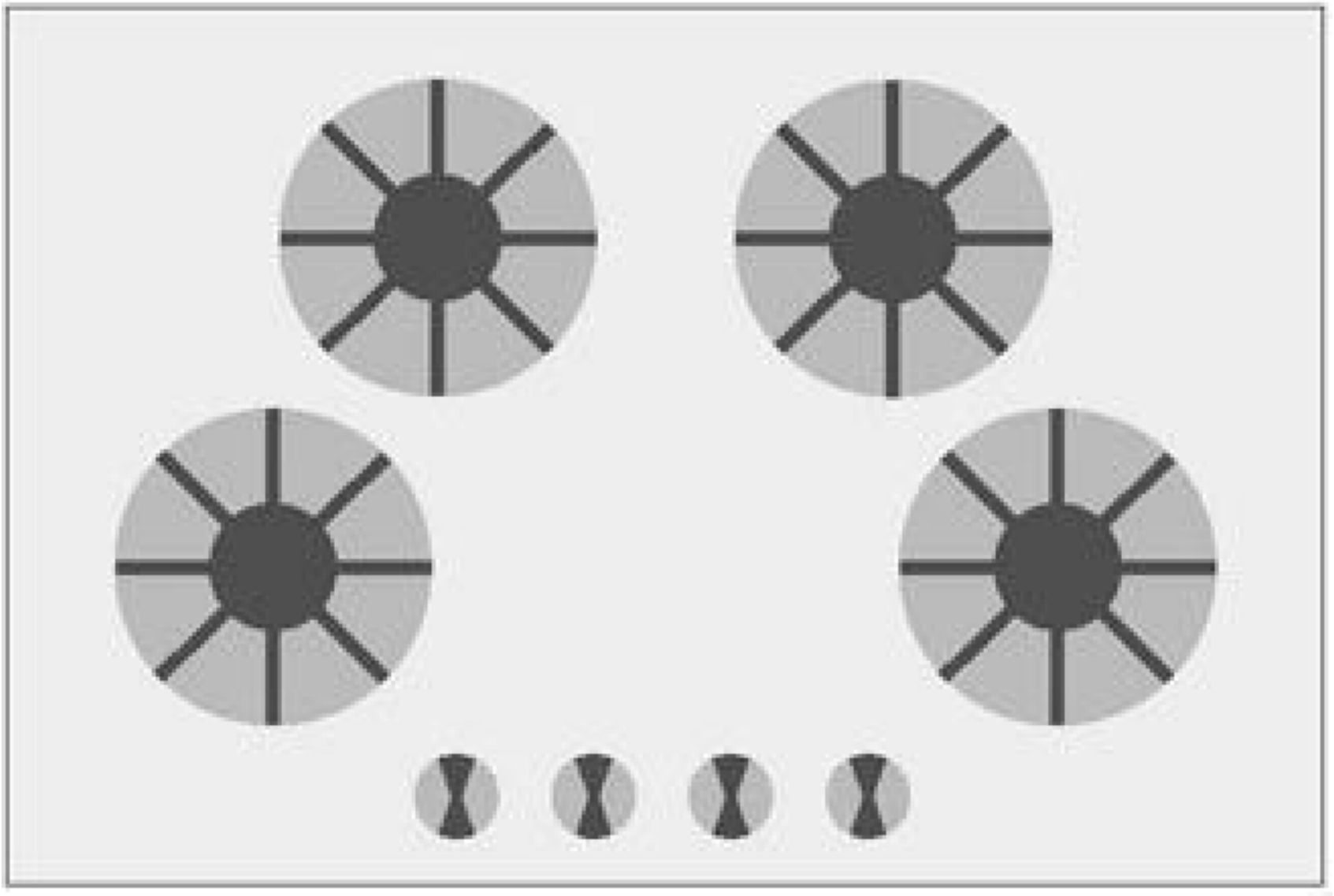

Donating organs

Country	Rate of Donation
USA	28%
France	99.9%
Britain	17%
Hungary	99.9%

Donating organs

Default Rule	Country	Rate of Donation
Explicit Consent	USA	28%
Presumed Consent	France	99.9%
Explicit Consent	Britain	17%
Presumed Consent	Hungary	99.9%

- Opt-in vs opt-out (Gigerenzer, 2008)

Maintaining Standards

Figure 12: tables

Checklists

- Slightly more invasive than other nudges(may not even count as a nudge)
- Hospitals introduced a surgical checklist during major operations
- 8 Cities Globally: Ifakara (Tanzania), Manila (Philippines), New Delhi (India), Amman (Jordan), Seattle (United States of America), Toronto (Canada), London (United Kingdom) and Auckland (New Zealand)
- Data were from $7,688$ patients
  - $3,733$ before and $3,955$ after checklist was introduced
- Incidences of major complications fell by $\frac{1}{3}$ (11% to 7%)
- 40% Drop in in-patient deaths (1.5% to 0.8%) (Epstein, 2009; Gawande, 2010; Haynes et al., 2009; Weiser et al., 2010)

Nudges and Theory

Nudges and Theory

- Nudges are designed to exploit features of our decision making
  - e.g., appealing to loss aversion in persuasion
- The remaining nudges described will be linked with specific theoretical underpinnings
  - Exploiting specific biases
  - Tailored for specific heuristics
  - Appealing to other features of decision making

Activity

- In groups, Identify the underlying theory behind the nudges discussed
  - What heuristics/biases do they harness?
  - Is there any other concept covered that might be relevant? (some may not have been covered yet, but you can guess)
- Fly; Cooker; Donating organs; Checklist

Activity (possible answers)

- Fly (focusing attention: combating “mindless”/“autopilot” behaviour)
- Cooker (path of least resistance / cognitive ease)
- Donating organs (Default heuristic)
- Checklist (combating “mindless”/“autopilot” choosing)

Principles relevant to Nudges

- Choice architecture (Thaler, Sunstein, & Balz, 2012)
- Path of least resistance
- Heuristics: Anchoring / Availability / Representativeness
- Biases: Optimism / over-confidence / Status-quo bias
- Loss aversion
- Emotion / affect / mood
  - *Hot* vs *cold* decisions
- "mindless" or "autopilot" choosing
- (Mental Accounting)

Choice Architecture

- **Choice architecture** is the "context in which people make decisions" (Thaler & Sunstein, 2008, p. 3)
- Everything matters
- No such thing as "neutral design"

(Thaler et al., 2012)

Choice Architecture

- 6 principles of good choice architecture
  - iNcentives
  - Understand mappings
  - Defaults
  - Give feedback
  - Expect error
  - Structure complex choices

(Thaler et al., 2012)

Path of Least Resistance (Defaults)

- Easier choice options are preferable to more difficult options
- Consider the placing of items near a till in a shop
- Sweets and crisps could be replaced with healthy snacks/fruit
  - This would lead to people choosing healthy snacks more often
- Too many choices makes decisions more difficult

Heuristics: Anchoring

- Recall Anchoring (heuristics lecture)
- Taking information salient in the environment and using it to *anchor* your decisions
- e.g., rigged wheel of fortune: 10 or 65
  - Is the percentage of African nations among UN members larger or smaller than the number you just wrote?
  - What is your best guess of the percentage of African nations in the UN?
- Mean response 25% and 45% (depending on 10 or 65)
  - In groups/individually:
    - Identify potential applications of anchoring (1-2 mins)

Heuristics: Anchoring

- Taking information salient in the environment and using it to *anchor* your decisions
- Rigged wheel of fortune example (10 or 65)
  - Is the percentage of African nations among UN members larger or smaller than the number you just wrote?
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Heuristics: Anchoring Applications

- Charities looking for donations:
  - Suggested amounts serve as an anchor
  - €100, €250, €1,000, €5,000
  - *vs* €50, €75, €100, and €150
- The more you ask for the more you get
  - e.g., court cases for compensation/damages

Heuristics: Availability

- the process of judging frequency by "the ease with which instances come to mind"(Kahneman, 2011, p. 128)
- Remind people of a salient (negative) incident and they will over-estimate the risk
  - and you can sell more insurance policies

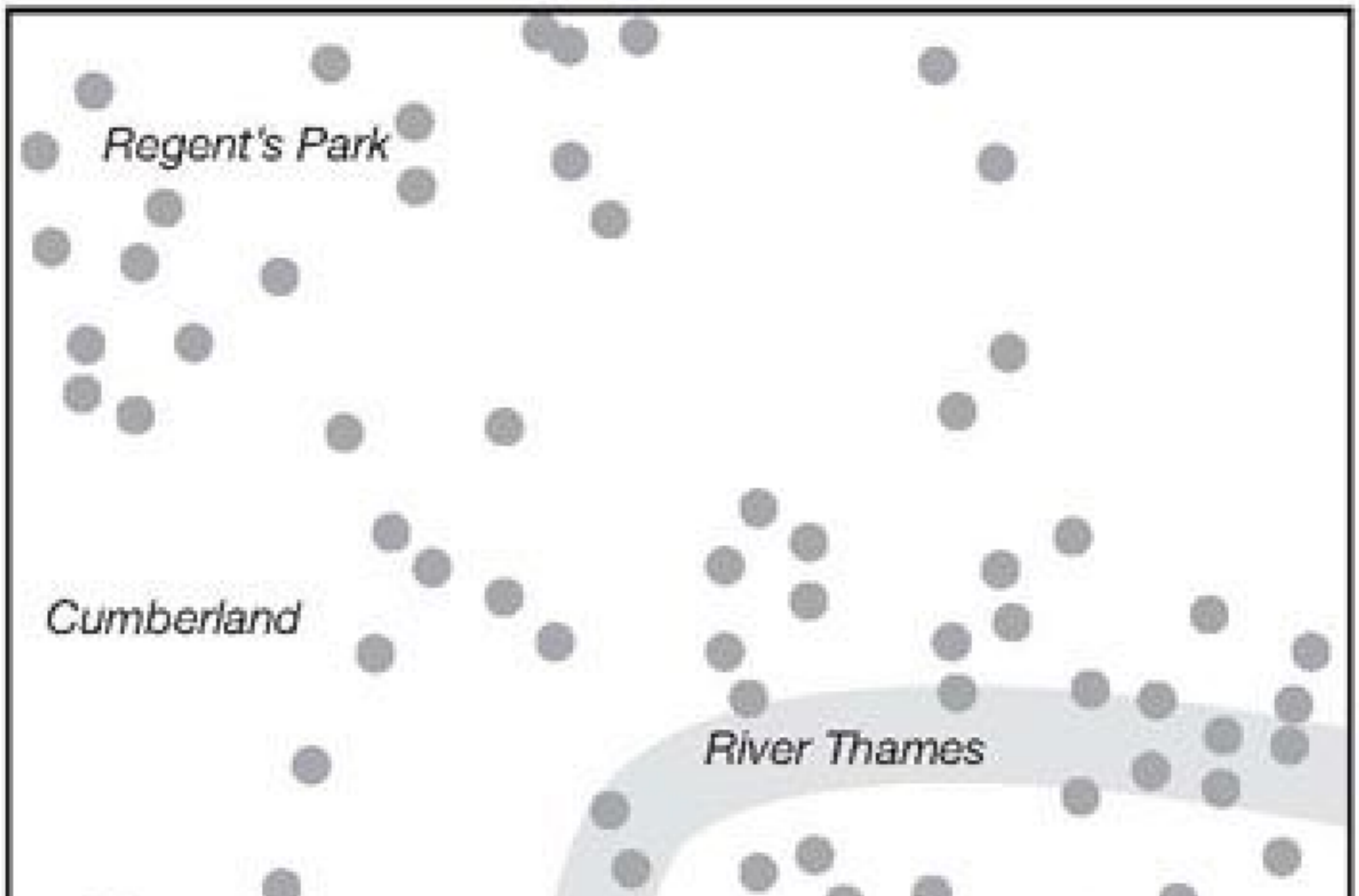
Heuristics: Combatting Availability

- Availability has been blamed for alcohol misuse
  - "everyone does it"
    - leading to more people drinking
- Large scale educational campaign in Montana stressed that majority of citizens do not drink
  - "*Most (81 percent) of Montana college students have four or fewer alcoholic drinks each week.*"
  - "*Most (70 percent) of Montana teens are tobacco free.*"
- The strategy has produced big improvements in the accuracy of social perceptions
  - also statistically significant decreases in smoking(Thaler & Sunstein, 2008, p. 68)

Heuristics: Representativeness

- judging a situation based on how similar the prospects are to the prototypes the person holds in his or her mind.

Map of London: V-1 rocket strikes (WWII)



Heuristics: Representativeness

- Seeing patterns when they are not there
- bombings appear to be around the Thames, and in the north west(German spies in the blank spaces?)
  - but they are random
- Illusion of a “Hot hand” or a “Streak” in basketball (Gilovich, Vallone, & Tversky, 1985; Thaler & Sunstein, 2008)

Optimism

- Optimism bias / over-confidence bias
  - lead to the planning fallacy
- Activity:
  - Identify strategies that may combat the planning fallacy
    - does any of your strategies count as a *nudge*

Status-quo Bias

- "strong tendency to go along with the status-quo or default option" (Thaler & Sunstein, 2008, p. 8)
- New cell phone: default options
- Private companies or public officials think that one policy produces better outcomes, they can greatly influence the outcome by choosing it as the default(Thaler & Sunstein, 2008, p. 8)
- Saving money

Loss Aversion

- Advertising framed in terms of losses
- e.g., “drink more water”:
  - “you sweat in the heat: you lose water.”
- Any other examples?

Emotions / “hot” vs “cold”

- In a few weeks we’ll learn that we are very bad at predicting how we will feel “in the moment”
  - Affective forecasting error
- How do we resist the urge to:
  - snack?
- Problems with smoking/alcohol
- Safe sex
- Excessive borrowing/Gambling?

Emotions / “hot” vs “cold”

- Alter the “choice architecture”
  - Don’t keep snacks in the fridge
    - Dinner party bowl of nuts (Thaler & Sunstein, 2008, p. 40)
  - Don’t go shopping on an empty stomach

“mindless” or “autopilot” choosing

- Accidentally driving towards work (on a Saturday)
- Stale popcorn
- Re-filling soup bowls (Thaler & Sunstein, 2008, p. 43)

Other Nudges

Other Nudges

Other Nudges

Other Nudges

Other Nudges

Other Nudges

Further Reading

- Thaler, R. H., Sunstein, C. R., & Balz, J. P. (2012). Choice Architecture. In E. Shafir (Ed.), *The Behavioral Foundations of Public Policy.* Rochester, NY: Social Science Research Network. (uploaded to Sulis)
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Assignment 1

Assignment 1

Heuristics

Based on your knowledge of heuristics and your observations of people's decision making in everyday life, identify a novel heuristic that may be guiding the decisions/behaviour of people. This heuristic may be context dependent or generalisable to multiple contexts.
Having identified a candidate heuristic:

(i) describe the heuristic
(ii) explain why this counts as a heuristic

Nudges

Identify a novel nudge that may lead to "better" decision making in a given context.

(i) Briefly describe the nudge
(ii) Indicate a theoretical rationale for your nudge (e.g., which bias/heuristic is it "harnessing")
(iii) Describe a possible test for the effectiveness of this nudge
(iv) Give consideration to the implications of a negative

Assignment 1 Marking scheme

Component	Percentage
Clear demonstration of an in depth understanding of the topic	30%
Critical thinking	30%
Competence in the identification and application of relevant research methods	20%
Originality/Novelty	20%
References, Citations, and Formatting	0% (potential penalty of 1 sub-grade)

In-class Activity

Nudging Ethics and Applications

- In groups:
  - Discuss the potential ethical implications of nudging
  - Identify potential candidates for a *novel* nudge (7-10 mins)

Avoiding the Ethical Problems

- Aim of Libertarian Paternalism is to:
  - "influence choices in a way that will make choosers better off, ***as judged by themselves***" (Thaler, 2015, p. 251; Thaler & Sunstein, 2003; 2008, p. 5)

References

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